

REMARKS

Favorable reconsideration and allowance of this application are requested.

**1. Discussion of Amendments**

By way of the amendment instructions above, the pending independent claims have been amended so as to emphasize various structural and functional attributes of the invention.

For example, the claims have been amended so as to delete reference therein to use of the dried bulk material as a fuel for a power station operating in connection with a pulp or paper production process. Instead, the claims now emphasize the various structural and functional attributes of the method, system and the system components -- particularly the walled enclosure in which the heat exchanger is positioned and the support structures associated with the conveyor belt as supported by Figures 1-4 and the description thereof in the originally filed specification.

Prior claim 13 has been canceled as redundant.

Thus, following entry of this amendment, amended version of claims 1-7, 9-11 and 19-22 will remain pending herein for consideration.

**2. Response to Drawing Objections**

The claim amendments noted above whereby reference therein to the use of the dried bulk material as a fuel for a power station operating in connection with a pulp or paper production process is believed to render moot the objections to the drawings. Withdrawal of such objections is therefore in order.

### **3. Response to 35 USC §112 Rejection**

The claim amendments whereby reference therein to the use of the dried bulk material as a fuel for a power station operating in connection with a pulp or paper production process is similarly believed to render moot the rejection advanced under 35 USC §112, first paragraph. Withdrawal of such rejection is also believed to be in order.

### **4. Response to 35 USC §103 Rejections**

The only issues remaining to be resolved in this application are the Examiner's rejections advanced under 35 USC §103(a). As will become evident from the discussion below, none of the applied references of record render the claims pending herein patentably unobvious.

Specifically, Kopp-Sorensen et al discloses a "closed loop" process. In this regard, as explained already during earlier prosecution, the idea in Kopp-Sorensen et al is to use heat from sludge burning for drying of sludge, i.e. at the same time to destroy the bulk material and to use the thermal energy obtained in the destruction process for improving the quality (dryness) of the bulk material to be destroyed. It thus makes no sense at all to combine any drying step using energy from separate waste water stream, as it would be totally contrary to the teaching of Kopp-Sorensen et al.

Maffet merely discloses that dried sludge may be used as fuel for a power station, while Hess et al merely teaches that waste liquor may be heated in a heater 24 by means of heat exchange with a hot recycle liquor. Thus, even combining Maffet and Hess et al with Kopp-Sorensen et al would not provide a method or a system whereby

- (i) a walled enclosure is provided defining a drying space and including a bulk material inlet for introducing bulk material to be dried into the drying space, a bulk material outlet for discharging dried bulk material from the drying space and a gas discharge connector for discharging drying gas from the drying space,

- (ii) at least one drying conveyor is positioned within the drying space so that the bulk material conveyed to the drying space through the bulk material inlet is deposited onto one end of the conveyor and the dried material is discharged through the bulk material outlet from an opposite end of the conveyor,
- (iii) a heat exchanger positioned within the walled enclosure so that drying gas to be heated is introduced from outside the drying space and heated drying gas from the heat exchanger is discharged into the drying space, and/or
- (iv) the at least one drying conveyor is provided with a pair of spaced-apart chains and support members extending between the pair of chains, and a wire mesh or screen fabric supported by the support members of the chains and running on the chain conveyor such that the heated gas travels through the wire mesh or screen fabric.

Thus, claims 1, 5 and 21 are patentably unobvious over such combination of references.

Mason Lambert each fails to cure the deficiencies of Kopp-Sorensen, Maffet and Hess et al. Specifically, Mason discloses a method and apparatus for drying agricultural crops. The plants are dried by using hot gas from furnace oven. Lambert merely teaches that incoming air may be heated via heat exchanger 21 via hot water. Significantly, Lambert discloses the necessity of separate heating means 29 and so the suggestion therein is that fresh air discharged from the heat exchanger 21 is insufficient to use as "drying gas".

There is no incentive in Mason to provide any of the structural and/or functional attributes (i)-(iv) noted above as is defined in the presently claimed invention. Moreover, Lambert clearly does not disclose or suggest providing the conveyor with a

pair of spaced-apart chains, support members extending between the pair of chains, and a wire mesh or screen fabric supported by the support members of the chains and running on the chain conveyor such that the heated gas travels through the wire mesh or screen fabric.

Thus, claims 2-3 and 22 on the one hand and claims 7, 9-11 and 19-20 are patentably unobvious over Mason and Lambert, respectively, when combined with Kopp-Sorensen, Maffet and Hess et al.

The rejection of claim 13 has been rendered moot by virtue of its cancellation. Applicants note however that Dinh is noted as disclosing generally a gas heating device 760 arranged inside a drying space. However, in view of the discussion above, it should now be evident that none of the applied references of record disclose a combination whereby a conveyor is provided with a pair of spaced-apart chains, support members extending between the pair of chains, and a wire mesh or screen fabric supported by the support members of the chains and running on the chain conveyor such that the heated gas travels through the wire mesh or screen fabric.

Claims 1, 4-6 and 21 are likewise patentably unobvious based on the combination of Lambert, Salokangas, Maffet and Hess et al. In this regard, the inappropriateness of Lambert, Maffet and Hess et al with respect to the pending claims herein has already been discussed above. Salokangas merely discloses that a filter material can be heated -- not dried -- by preheated air. Preheating is produced by allowing the air to flow through a hose placed into a waste water tank. There is no reasonable basis for combining the teaching of this Salokangas with Lambert. For example, it is clear that the heat obtained by the arrangement of Salokangas is not sufficient for drying bulk material. Secondly, it makes no practical sense to preheat the gas in Lambert by using waste water, as it would be totally contrary to the teaching of Lambert, which stresses the importance of the heat and condensate recovery from the exhaust stream of the drying process.

Thus, a person skilled in the art would derive no direction from Lambert and Salokangas for solving the complex problem of ***simultaneous*** drying of bulk material to be used as fuel and cooling waste water from paper or pulp production. Withdrawal of the rejection based on the combination of Lambert, Salokangas, Maffet and Hess et al is therefore in order.

Mason does not cure the deficiencies of Lambert, Salokangas, Maffet and Hess et al as already discussed. As such, the rejection advanced under 35 USC §103(a) is therefore also in order.

Withdrawal of all rejections advanced under 35 USC §103(a) and early passage of this application to allowance are therefore solicited.

##### **5. Fee Authorization**

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140.

Respectfully submitted,

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